



Get to
know the

i-codes

This is the second in a series of publications exploring the differences between the Uniform and International Codes (I-Codes). Topics covered in the series include means of egress, building uses, heights and areas, types of construction, fire-resistance-rated assemblies, accessibility, structural provisions, and the residential and mechanical codes. Additional topics may be added in 2004.

Building Uses

About the Codes

The 2003 editions of the International Building, Residential, Mechanical and Fire Codes (I-Codes) replaced the Uniform Codes in Seattle on Aug. 15, 2004*.

Copies can be purchased from the Public Resource Center (PRC), 20th floor, Seattle Municipal Tower, 700 Fifth Ave., (206) 684-8467, or:

- WA Assn. of Building Officials
(360) 586-6725, www.wabo.org
- International Code Council (ICC)
(800) 284-4406, www.iccsafe.org

— I-Codes Training

I-Code trainings are offered by the following organizations:

- WA Assn. of Building Officials
(360) 586-6725, www.wabo.org
- International Code Council
(800) 284-4406, www.iccsafe.org
- American Inst. of Architects-Seattle, (206) 448-4938
www.aiaseattle.org
- Structural Engineers Assn. of WA
(206) 682-6026, www.seaw.org
- Building Industry Assn. of WA
(360) 352-7800, www.biaw.com
- Master Builders Assn. of King & Snohomish Counties
(425) 451-7920, www.mba-ks.com

— Technical Code Support

- Building Code
(206) 684-4630
Hours: M-F, 1 p.m.-4:15 p.m.
- Electrical Code
(206) 684-5383
Hours: M/W/F, 7:30 a.m.-5:30 p.m.
Tu/Th, 10:30 a.m.-5:30 p.m.
- Energy/Mechanical Code
(206) 684-7846
Hours: M-F, 1 p.m.-4:15 p.m.

Mixed-Use Buildings in the IBC

One significant difference between the International Building Code (IBC) and the Uniform Building Code (UBC) is the way in which mixed-use buildings are regulated. The UBC requires that mixed-uses be separated from each other in almost all situations. The IBC, however, frequently allows multiple uses in the same building with no separation between them. The IBC regulates three types of mixed-use situations: incidental use areas, accessory uses, and mixed occupancies.

Incidental Use Areas: Incidental use areas are not defined in the IBC, other than to say they are “incidental to the main occupancy.” However, Table 302.1.1 lists the specific incidental use areas that must be separated from the main occupancy. The required separation is usually rated construction, and in many cases, an automatic sprinkler system is an acceptable substitute. Examples of incidental use areas are parking garages, laundry and storage rooms over 100 square feet, and furnace and boiler rooms with large equipment.

Accessory Use Areas: Accessory use areas are similar to incidental use areas. Uses accessory to the main occupancy that Table 302.1.1 does not require to be separated may be treated as accessory use areas. Accessory use areas do not need to be separated if they are less than 10 percent of the area of the story in which they are located, and do not exceed the height and area allowed for their use by Table 503. (Table 503 is Allowable Height and Building Areas, similar to UBC Table 5-B.)

There are some special rules that apply to assembly areas that are accessory to other occupancies. Accessory assembly areas that are 750 square feet or less are considered to be part of the main occupancy instead of separate uses. All assembly areas accessory to Group E occupancies are considered part of the Group E occupancy. Religious educational rooms and religious auditoriums accessory to churches are only considered separate occupancies if their occupant load is 100 or more.

Mixed Occupancies: The IBC allows mixed occupancies to be separated or nonseparated. (There are exceptions for hazardous occupancies.) For nonseparated occupancies, the height and area limitations for each occupancy are applied to the entire building. The most restrictive type of construction is then determined and applied to the entire building, and the allowable height and area for each use is determined by the type of construction.

For separated occupancies, the rules are very similar to the UBC. Occupancies are separated by fire barriers, which are similar to occupancy separations under the UBC, and each use is subject to height and area provisions for that use. The area of each story must comply with the “sum of the ratios” rule—the sum of the ratios of the actual area of each use divided by the allowable area may not be more than one.

Changes in Uses and Occupancies in the IBC

This article will describe some of the differences between the International Building Code (IBC) and the Uniform Building Code's (UBC) occupancy categories.

The IBC uses the same ten occupancy groups as the UBC: Groups A (Assembly), B (Business), E (Educational), F (Factory), H (High Hazard), I (Institutional), M (Mercantile), R (Residential), S (Storage) and U (Utility). Several of the occupancy categories remain identical to those found in the UBC: Groups B, F, M, S and U are almost unchanged. The table at right summarizes the IBC occupancy classifications and their relationship to the UBC classifications.

Among the major differences is Group A (Assembly). In the IBC, it is not based on occupant load, but on the type of activity that will occur in the building. Group A still includes buildings used for gatherings of people, and, similar to the UBC, small assemblies may still be classified as other occupancies. However, the main Group A classifications are different from the UBC: A-1 includes theaters and concert halls; A-2 includes drinking and dining uses; A-3 is churches, libraries, courtrooms, and community halls as well as assemblies that don't fit another category; A-4 is indoor sporting venues with spectator seating; and A-5 is structures used for participation in and viewing of outdoor activities.

Another significant difference between the two codes is Group R (Residential). Group R is very

similar in the IBC and UBC, except that UBC category R-1 is two categories in the IBC. In the IBC, Group R-1 describes residential occupancies with short-term occupants such as hotels

and motels. Group R-2 includes longer-term housing such as apartments and condominiums. In both codes, Group R-3 refers to one- and two-family dwellings.

IBC Occupancy	Description	Comparable* UBC Category
A-1	production and viewing of performing arts or motion pictures, usually with fixed seating	A-1, A-2, A-2.1 or A-3
A-2	consumption of food and drink	A-2.1 or A-3
A-3	worship, recreation or amusement; assemblies not in other categories	A-2.1 or A-3
A-4	viewing of indoor sporting events with spectator seating	A-2.1 or A-3
A-5	participation in and viewing of outdoor activities	A-4
B	office, professional or service-type transactions	B
E	use for educational purposes for 6 or more persons through 12th grade; day care for more than 5 children older than 2-1/2 years	E-1 through E-3
F-1	moderate hazard factory	F-1
F-2	low hazard factory	F-2
H-1	detonation hazard	H-1
H-2	hazard of deflagration or accelerated burning	H-2
H-3	hazard from materials that readily support combustion or present a physical hazard	H-3
H-4	health hazards	H-7
H-5	semiconductor fabrication, research and development	H-6
I-1	supervised residential environments for 16 or more persons with mental or other disabilities <i>Note: Many of these will be classified as LC occupancies by the State Building Code</i>	LC
I-2	hospitals, nursing homes, mental hospitals	I-1.1, I-2, I-3
I-3	prisons and correctional centers for more than 5 persons	I-3
I-4	day care for more than 5 children aged 2-1/2 or less; day care for more than 5 adults who are unable to respond to an emergency	E-3
M	sale of merchandise	M
R-1	short-term residential	R-1
R-2	long-term residential; more than 2 dwelling units	R-1
R-3	one-and two-family dwellings	R-3
S-1	moderate hazard storage	S-1
S-2	low hazard storage	S-2
U	utility—private garages, carports, fences, towers	U-1 & U-2

* Not all of the UBC and IBC categories are exact matches

